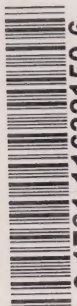


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CANADA
DOMINION BUREAU OF STATISTICS *Canada*
CENSUS DIVISION

TECHNICAL PAPERS AND TECHNICAL MEMORANDA
ISSUED BY THE CENSUS DIVISION, 1965-1968

An annotated List of Studies and Reports

by

Herman G. Beyer

Census Research



WORKING PAPER (General Series) No. 1

Ottawa, May 1971



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TECHNICAL PAPERS AND TECHNICAL MEMORANDA
ISSUED BY THE CENSUS DIVISION, 1965-1968

An annotated List of Studies and Reports

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TECHNICAL PAPERS AND TECHNICAL MEMORANDA
ISSUED BY THE CENSUS DIVISION, 1965-1968

An annotated List of Studies and Reports

1. Introduction

The purpose of this annotated list is to provide the reader with an overview of the scope and the contents of the various papers and memoranda to spotlight some of the research problems encountered and to enable the user of this list to decide what particular publication may serve his needs.

The Technical Papers and Technical Memoranda issued by the Census Division during 1965 to 1968 were the main avenue for personnel of the Division and of other related areas in the Bureau to report on their work. Unlike the printed publications of the Dominion Bureau of Statistics which are listed in the DBS Catalogue of Publications and bear catalogue numbers, the papers and memoranda annotated here are processed publications of the Census Division. The series of Technical Papers contains reports of an analytical or technical nature which were meant for a wider distribution than the various series of memoranda. The Technical Memoranda series are reports of then on-going work or of completed studies; they represent research notes and observations which are not always the outcome of sophisticated analysis. Both series have now been replaced by the current series of Analytical and Technical Memoranda for distribution to a wide circle of institutions, agencies and academic researchers, and by various series of Working Papers with a more restricted circulation.

In preparing the abstracts, efforts have been made to show what a paper is all about, to describe the methods followed, to report on the results, and to present the general conclusions of the study but these abstracts should not be looked upon as critical evaluations of the annotated papers. Special thanks are due to Mrs. A. Leduc and Mrs. J. Parker, both staff members of the Demographic Analysis and Research Section, for their able assistance in preparing the first drafts of these annotations.

Copies of any of the listed papers and memoranda, and additional copies of this working paper can be obtained without cost by writing to the Technical Coordinator (Research), Census Division, Dominion Bureau of Statistics, Ottawa, Ontario.

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4. ABSTRACTS OF CENSUS TECHNICAL PAPERS

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1. SURVIVAL RATIOS FOR INTERCENSAL BIRTHS

Leroy O. Stone

Ottawa: Processed, June 1965, 12 pages, 2 tables, references.

The paper's purpose is to facilitate analytical applications of DBS census and vital registration data. The author describes three methods of estimating the survivors of a cohort of inter-censal births: the census survival ratio, the national life table survival ratio, and the regional life table survival ratio. Use of the life table is explained and both — point and interval — life table estimators are presented. For maximum accuracy the writer recommends the use of "Interval" life table estimators as "point" life table estimators may overstate survivorship.

2. OFFICIAL ESTIMATES OF POPULATION

Allan H. LeNeveu

Ottawa: Processed, June 1965, 8 pages, 2 tables

Margaret E. Fleming

The authors describe the methods used of calculating — quarterly — estimates of the total population of Canada; and — annually — population estimates for Canada and the provinces by five-year age groups and sex, and by marital status by broad age groups and sex. The paper shows the method's components including interprovincial migration. It explains the revision of estimates following a census and provides information on the estimates of families. Table 1 presents an extract from a work sheet for calculating estimates of population by sex and age, while in table 2 the estimated net inter-provincial migration for the provinces, 1962-1963, is given.

3. SAVINGS THROUGH MATØP, A CASE STUDY

Greg Roger

Ottawa: Processed, July 1966, 8 pages

The paper presents the results of a study of the relative efficiency of MATØP programming in comparison with manual clerical calculations performed on desk calculators. The author reaches the conclusion that substantial savings in time may be achieved by applying MATØP programming.

4. CENSUS TECHNICAL PAPERS — Concluded

<u>No.</u>		<u>Author</u>
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4. SOME HIGHLIGHTS OF THE INCREASE IN THE NUMBER OF CANADIAN
URBAN CENTRES, 1871-1961

Ottawa: Processed, October 1965. 34 pages, graphs,
tables.

Leroy O. Stone
George J.V. Kokich

The authors describe the principal features of historical changes in the number, size, and size group distribution of urban centres with a population of 5,000 and over for Canada and five major Canadian regions. The paper gives the numerical growth and rate of growth for such urban centres, and it indicates the general trend of major changes. Some highlights of regional differences as a major aspect of Canadian urban development are shown. Appendices provide the reader with a definition of urban complexes, and notes on urban centres, urban size groups and major regions. Charts and tables give detailed information on the subject studied.

5. A BIBLIOGRAPHY OF CANADIAN DEMOGRAPHY

Ottawa: Processed, December 1966, 147 pages

Martha B. Stone
George J.V. Kokich

This is a preliminary edition designed for those familiar with the literature of the field. It is not meant for general use or for use by students. The paper provides guide references to Canadian demographic literature, published and unpublished, until 1966. Section I is arranged alphabetically by authors, while in Section II the same references are listed by subject headings, patterned after the Population Index of the Office of Population Research, Princeton University, and the Population Association of America.

5. ABSTRACTS OF TECHNICAL MEMORANDA

5.1 TECHNICAL MEMORANDA (CENSUS TEST SERIES)

No.

Author(s)

1. METHODOLOGY OF THE 1967 CENSUS TEST

Ottawa: Processed, September 1966, 4 pages

I.P. Fellegi
K.J. Krotki
R. Platek

The memorandum outlines the recommendations concerning the methodology and field operations of the 1967 Test Census in London, Ontario, based on discussions with senior personnel of the Dominion Bureau of Statistics and with experts in field operations and methodology of the U.S. Bureau of the Census. There are 20 main recommendations altogether which include the test site, testing procedure, preparation of address register, mailing and receiving of the census forms, follow-up enumeration, quality check, tabulation and analysis of data. It is suggested the analysis of the data collected should include twelve analytical reports and studies. Two independent projects concerning (a) the development of an automatic geographic coding system for the test city, and (b) the development of an independent address register for comparison with the field-listed and postal checked list of addresses are also recommended.

2. THE OTTAWA PRE-TEST OF THE LONDON LISTING OF ADDRESSES

Ottawa: Processed, December 1966, 35 pages, tables, graphs

T.R. Sehdev

The objective of the Ottawa pre-test of listing is described with regard to the efficacy, completeness and understandability of concepts and terminology to be used in the instructions for the listing operations in London, Ontario in 1967. The pre-test was carried out by ten persons of the Dominion Bureau of Statistics familiar with census work. It describes the test locale, selection of blocks, test arrangements, car-listing blocks, walk-listing blocks and occurrence of discrepancies among listers. Causes for under-listing and overlisting are given. The memorandum recommends a study of characteristics of houses on which listers disagreed, and it concludes that this pre-test of procedures is as significant as a pre-test of the test-census questionnaire.

3. THE QUALITY CONTROL OF THE LONDON LISTING OF ADDRESSES

Ottawa: Processed, April 1967, 20 pages, tables

M.R. Dunn

The memorandum describes the quality control plan on the test census listing and explains the plan's mechanics to persons responsible for its maintenance. The quality control programme was designed to (a) control the quality of the listers' work; (b) compile data on error rates and evaluate differences in rates amongst listers and between types of areas; (c) accumulate experiences in preparing quality control programmes. It was found that the anticipated over-all error rate of 5 per cent was exceeded, and that the estimated error rate for the whole period was 11.8 per cent, caused mainly by underlisting in mid-town blocks and by insufficient time to implement the plan. The

5.1 CENSUS TEST SERIES - Continued

<u>No.</u>		<u>Author</u>
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3. - Concluded

author recommends (i) a clear and concise definition of error by the subject matter people and by the designers of any future quality control plans; (ii) more extensive listing procedures in some or all areas; (iii) pairing of walking listers; (iv) different error rates for different types of areas. Appendices provide the reader with quality control procedures for listing operations; a summary of the listing method; and tables on error rates.

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| 4. | <u>REPORT ON TELEPHONE ASSISTANCE SERVICE - OTTAWA PRE-TEST</u>
Ottawa: Processed, February 1967, 8 pages | A.J. Kempster |
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The telephone assistance service was provided to persons having problems in completing the pre-test census questionnaire. The author describes the short training session given to staff members who answered the calls. A summary of calls received by time and by category of question is given, also a tally of actual questions asked. The report indicates that 5.5 per cent of the respondents required telephone assistance. For future tests the author recommends longer training sessions and a tab-indexing-by-question-number in the telephone assistance manual.

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| 5. | <u>A MATCH OF THE FIELD-LISTED LONDON ADDRESS REGISTER WITH THE 1966 CENSUS VISITATION RECORDS</u>
Ottawa: Processed, November 1967, 12 pages, tables | Methods Research
Section |
|----|--|-----------------------------|

The paper describes the matching of two independent lists of residential addresses for London, Ontario. The two lists were matched address by address to discover which one of the lists provided better coverage. It was found that the listings made by personal inquiry for the census visitation records are more complete in respect of sub-addresses. The visual listings of the field-listed address register is slightly superior in single dwelling listings but is unreliable in two-unit structures. Both lists show weaknesses in the multi-unit categories. Instructions for the matching are given in an appendix, and four tables give data on matched and unmatched addresses.

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| 6. | <u>FIELD OPERATIONS - OTTAWA PRE-TEST: 1967 CENSUS TEST QUESTIONNAIRE</u>
Ottawa: Processed, June 1967, 22 pages | C.G. Gilfillan |
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The paper describes a survey of 734 households in Ottawa to field-test the questionnaire of the planned 1967 census test. The author records the planning and organization of the field test and discusses in detail the interviewing and training of enumerators. In assessing the training programme

5.1 CENSUS TEST SERIES -- Continued

No.

Author

6. -- Concluded

and the check-in instructions for completed questionnaires, the author recommends a longer training period, and that in future tests the interviewers should pick-up and bring in one or two completed questionnaires for review in the field office before continuing with succeeding households. A survey cost breakdown shows that the total cost of the survey amounted to approximately fifteen hundred dollars.

7. THE OTTAWA PRE-TEST OF NOVEMBER-DECEMBER 1966

L.O. Stone

Ottawa: Processed, June 1967, 45 pages, appendices, tables

The memorandum is the main documentation of the 1966 Ottawa pre-test which was carried out to test the validity and viability of the questionnaire for the 1967 trial census in London, Ontario. The paper summarizes the procedures and findings of the pre-test by presenting an outline of the pre-test survey; auxiliary inquiries; findings of the pre-test survey; negative criticism and positive contributions of the pre-test and its related documentation. Several appendices show pre-test documents such as Terms of reference; Design of sample selection; Ottawa questionnaire; Interviewer's schedule; and Supplementary tables for non-responses by reasons, and for non-response rates by questions.

8. OTTAWA PRE-TEST HOUSING AND HOUSEHOLD QUESTIONS: A STUDY OF 479 RESPONDENT-FILLED RETURNS

Hideo Mimoto

Ottawa: Processed, September 1967, 20 pages, graphs, tables

The paper outlines the more important aspects of a similar comprehensive report on a study of the housing and household questions in the Ottawa pre-test of November 1966, and it summarizes the main findings of this report. The author develops the scope and type of the study, comments on the question performance, and discusses non-response rates. Two frequency charts of satisfactory responses are given. The writer finds that 78 per cent of the respondents made 76 per cent or more of the requested responses in a satisfactory manner. As a number of questions on the pre-test questionnaire were found to be unsatisfactory, the author formulates specific recommendations concerning the wording or presentation of some of the questions.

9. A MATCH OF THE LONDON MUNICIPAL ASSESSMENT ROLL WITH THE FIELD-LISTED ADDRESS REGISTER AND THE 1966 CENSUS VISITATION RECORDS

T.R. Sehdev

Ottawa: Processed, September 1967, 19 pages, 2 tables

The author compares three documents containing basic and sub-addresses in a city of about 200,000 people. Purpose of the study is (a) to measure the quality of the address register developed through listings by enumerators in

5.1 CENSUS TEST SERIES - Continued

No.

Author

9. - Concluded

September 1966, and (b) to assess the coverage of dwelling units in all three documents. The author gives an outline of the matching procedures, and he presents the match results in two detailed tables. He finds that the Municipal Assessment Roll contains far more two-unit structures which appear as single units in the other two documents. The author states that these discrepancies may have been caused by the differences in definition used by census or by municipal authorities, and he concludes that the significance of uniformity in definitions constitutes the major finding of this study. The paper infers that through the use of the Municipal Assessment Roll it should be possible to supplement information obtained through field-listing operations.

10. RESPONSES TO QUESTIONS ON THE MAIL RETURNS FROM THE LONDON TEST CENSUS

D.E. Gower

Ottawa: Processed, November 1967, 10 pages

The study covers 160 long forms of mail returns containing 533 names to determine the response history of various questions asked in the London test census. The author outlines the procedures adopted for this work, and he comments on the data presented in a table showing the success and failure rates for the 53 population and 28 housing questions on the test questionnaire.

11. THE LONDON LISTING OF ADDRESSES IN 1966, AN ACCOUNT OF PLANNING AND EXECUTION

C.G. Gilfillan

Ottawa: Processed, September 1967, 21 pages

This paper deals with the listing of approximately 60,000 addresses in a city of about 200,000 people previous to a test census carried out a year later. The author gives a detailed account of the planning of the operation and of the execution of the plan, and he concludes with several recommendations concerning the field organization. As costs of the operation, excluding head office staff, a sum of about four thousand dollars is given. Several appendices provide information on: time-table, listers' kit; administrative supplies list; listing instructions; field work prior to instructions; listing assignments of census tracts; and office processing of completed listings.

5.1 CENSUS TEST SERIES — Continued

- | <u>No.</u> | | <u>Author</u> |
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| 12. | <u>POSTAL CHECK OF ADDRESSES (MAY 1967), LONDON TEST</u>
Ottawa: Processed, October 1967, 6 pages, graph, tables | H.V. Ashenkampf |

The paper reports on the postal check carried out in May 1967 on the field-listed address register prepared in September 1966 for the London test census of September 1967. The author explains why differences may occur between the post office check and the original address register. A chart provides the reader with a breakdown of the originally field-listed addresses and their reconciliation with the postal check. Of the 56,384 addresses shipped to the post office, 54,384 were matched, 603 rejected and a change in address was indicated for 1397 cards. The Post Office also found 2,859 additional new addresses, thereby indicating the need for a postal check.

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| 13. | <u>1967 CENSUS TEST — LONDON: THE TELEPHONE ASSISTANCE SERVICE</u>
Ottawa: Processed, November 1967, 15 pages, tables | E. Yablonski |
|-----|--|--------------|

The paper assesses the performance of the telephone assistance service provided to help respondents in understanding and answering questions in the census test questionnaire. The author reports on the preliminary planning for this service, and he documents the experiences made with five tables for calls received; enquiries on questions asked of all respondents; enquiries on questions asked of 25 per cent of respondents; most frequent enquiries and requests; clerk hours and cost. As total cost of the service a sum of approximately 1250 dollars is given. The author concludes that the telephone assistance service should be available for whatever period local needs demand it. An appendix shows the questions asked in the 1967 census test.

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| 14. | <u>THE CANADIAN TEST CENSUS PROGRAMME</u>
Ottawa: Processed, June 1968, 6 pages | E. Yablonski |
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The author gives as reasons for a programme of census tests, prior to the 1971 decennial census, enumerators' biases, underenumeration, a large response variance, and the requests for detailed socio-economic characteristics. He reports briefly on the first test in 1967 in London, Ontario, carried out by the mail-out, mail-back method which resulted in an 85.1 per cent response. The 1968 census test in Toronto will test questionnaire content and format, and the economic characteristics questions. An evaluation programme will determine ratios of response to different questions and effectiveness of new and revised procedures. For October 1968 a test census in a bilingual area is foreseen to test procedures and response in such an area. At the same time trial censuses in partly urban and partly rural areas will test the population and the agricultural questionnaires for content and format and for self-enumeration in rural areas. These trials will also try to estimate rates of pay for field staff to provide data for

5.1 CENSUS TEST SERIES - Concluded

No.

14. - Concluded

estimates of future census costs. The author concludes by stating that the 1969 dress rehearsal is in the planning stage, and that it will utilize the results of the earlier tests.

5.2 TECHNICAL MEMORANDA (CENSUS EVALUATION SERIES)

No.

Author

1. CONTENT CHECK OF THE 1961 CENSUS OF POPULATION I.P. Fellegi
Ottawa: Processed, March 1968, 7 pages, 1 table.

The author discusses some possible sources of errors derived from responses to the census. In comparing the response variance from different censuses to the sampling variance from different samples (surveys) the author outlines a technique of estimating the response variance by use of the standard deviation. He raises five separate points in interpreting the results of the study which was carried out to test the outlined procedure in a pilot area in and around Cornwall in the 1961 Census. A table, referring to the study area only, gives an indication of the magnitude of the response variance. The reader is also referred to a more detailed mathematical description available from the Sampling and Survey Research Staff, Dominion Bureau of Statistics.

2. COVERAGE CHECK OF THE 1961 CENSUS OF POPULATION I.P. Fellegi
Ottawa: Processed, March 1968, 23 pages, tables.

This memorandum is the final report on Project III of the Quality Analysis of the 1961 Census of Population (Mail Follow-up Survey). The purpose of the project was to obtain an estimate of the underenumeration encountered in the said census. The author explains thoroughly the procedure followed in tracing persons selected as a sample from the 1956 census records. A table provides a descriptive flow chart of the action taken in the course of successive mailings of registered letters of inquiry during the tracing process. Other tables show the success of the first two steps of the mailing operation; the results obtained at Regional Office level in tracing respondents' addresses; another flow chart of the results of the field tracing; and the summary results of the whole project. Two final tables show the percentage distribution of the results by region and by age group.

Eight appendices provide facsimiles of the different types of letters sent to trace the persons in the sample taken from 1956 census records, a special form used by Regional Offices for the reverse record check in the tracing process, and a procedures manual for the reverse record check for Project III.

5.3 TECHNICAL MEMORANDA (POPULATION ESTIMATES AND PROJECTIONS SERIES)

No.

Author

1. REVIEW OF CANADA'S RECENT NATIONAL POPULATION PROJECTIONS M.V. George
Ottawa: Processed, September 1967, 9 pages, bibliography

This memorandum comments on five recent projections of the population of Canada prepared after the 1961 Census. The variations in underlying assumptions and the methodology used in preparing all five sets of projections are outlined. Each projection - prepared by the United Nations, Weisz, Kasahara, Stukel and again, with revisions, by Kasahara - is then explained in greater detail and evaluated. A table gives a comparative picture of the various projection results, omitting the projection by Weisz as it did not cover the whole population but only the economically active part. The author reaches the conclusion that the revised projections by Kasahara are the best, judging from any standard. The paper contains bibliographical references on Canadian population projections.

2. 1966 CENSUS DATA AND RECENT POPULATION PROJECTIONS FOR CANADA .. M.V. George
Ottawa: Processed August 1968, 21 pages, tables. K.S. Gnanasekaran

The authors revised the projections made in Staff Study No. 19 of the Economic Council of Canada (Illing, Wolfgang M., "Population, family, household and labour force growth to 1980". Ottawa 1967). The revised projections retain the Council's assumptions on future mortality, fertility and migration but take into account the 1966 Census data for age and sex that have become available since the publication of staff Study No. 19. The paper presents three projections (high, medium and low) for each year up to 1981 by five-year age groups and sex, and it compares census results with intercensal estimates and original projections.

5.4 TECHNICAL MEMORANDA (GENERAL SERIES)

- | <u>No.</u> | | <u>Author</u> |
|------------|--|--------------------------------------|
| 1. | <u>1965 ANNUAL MEETING OF THE POPULATION ASSOCIATION OF AMERICA</u>
Ottawa: Processed, May 1965, 7 pages | K.J. Krotki
M. Naqi
L.O. Stone |
| | <p>This paper reports on the annual meeting of the PAA held in Chicago on April 23-24, 1965, without attempting a comprehensive and balanced review of this conference. The paper lists the 14 sessions held, outlines some of the papers presented and gives some highlights of the meeting.</p> | |
| 2. | <u>A NEW CANADIAN SERIES (PRINCETON STABLE POPULATION PARAMETERS)</u>
Ottawa: Processed, August 1965, 4 pages, 2 tables | K.J. Krotki |
| | <p>The memorandum discusses a new series concerning measures of reproduction. Both GRR (gross reproduction rate) and NRR (net reproduction rate) have been published in the <u>Population Index</u> since 1936. In the April 1965 issue crude rates for the female population, rather than for both sexes, are given. These intrinsic rates are parameters of a female stable population. The paper includes two tables: (1) Princeton Measures of Fertility and Mortality for Canada (2) Intrinsic and Crude Measures of Fertility and Mortality for Canada, Ontario and Quebec (Princeton-Keyfitz comparison) It also draws attention to the use of graphs and charts as tools of analysis.</p> | |
| 3. | <u>SOME COMMENTS ON NORMAN RYDER'S ARTICLE ON ETHNIC ORIGIN</u>
Ottawa: Processed, August 1965, 4 pages | K.J. Krotki |
| | <p>The author refers to an article by N.B. Ryder, "The interpretation of origin statistics", The Canadian Journal of Economics and Political Science, (21)4, November 1965, 466-479, as a milestone and benchmark in the field of statistics for ethnic origin. The memorandum tries to clarify the difference between nationality and citizenship, and it is critical of several aspects presented by Ryder.</p> | |
| 4. | <u>ADDRESS REGISTER PROJECT, VISIT TO KITCHENER-WATERLOO</u>
Ottawa: Processed, September 1965, 8 pages | M.C. Chesney |
| | <p>The author reports on the problems in creating an address register which will list all addresses and sub-addresses of census households without referring to names of occupants. He evaluates independent sources, and for the development of a satisfactory list he recommends a combination of such primary sources as (a) Census Visitation Records, (b) Residential Power Connections, (c) Municipal Field Data, and (d) a Postal Check carried out by mail carriers after a fairly complete mailing list has been assembled. He concludes by stating that other known sources such as assessment rolls, city directories, voters lists, building permits and other sources should be used as secondary sources only.</p> | |

5.4 GENERAL SERIES - Continued

No.

Author

5. EDUCATION: AN ALTERNATIVE INTERPRETATION

G. Roger

Ottawa: Processed, October 1965, 6 pages, tables

The author provides more detailed information on education than the one given in Educational Levels and School Attendance, 1961 Census, Vol. 7.1, bul. 10. While he agrees with the DBS Daily Bulletin summary, "Much higher percentages of young persons, 5 to 24 years of age, were attending school in 1961 than in 1951 or earlier census periods", his analysis finds that for the age groups 5-9 and 10-14 a steady gain in attendance rates has been experienced. On the other hand the two older age groups have shown spectacular gains in relation to their smaller absolute numbers. For the age group 15-19 school attendance has risen from 24.7 per cent in 1921 to 58.5 per cent in 1961, while the age group 20-24 more than tripled its attendance rate in the same period, from 2.3 per cent to 8 per cent, thereby indicating a significant trend towards a rising educational attainment of the population. The author also compares school attendance by province and sex and finds that for Canada and all the provinces no significant differences exist between male and female participation for the age groups 5-9 and 10-14, and that for the age group 15-19 variations are only slight. The oldest group, 20-24, shows the largest differences between the sexes, registering 11.3 per cent for males against 4.6 per cent for females for Canada, and that in all the provinces rates for male attendance are higher than for female attendance.

6. COMPUTER LESSONS

Editor of
Technical
Memoranda

Ottawa: Processed, December 1965, 2 pages

The editor presents here his views on the computer lessons given in Whitehall, London, England to members of parliament of Great Britain. As there are no great mysteries but only logic and knack, as he states it, it seems that the rudiments of how a computer works and what it can do, are within the grasp of anyone prepared to spend a little time studying them. The editor concludes that newcomers to DBS should be started on MATOP and similar general programmes rather than on desk calculators.

7. THE CLEVELAND TEST CENSUS: MAY 1965

A.H. Portugal

Ottawa: Processed, December 1965, 14 pages

The Cleveland Test Census was one of a number of feasibility studies about census taking by some means of self-enumeration and about the cost structure, undertaken by the Bureau of the Census. The author attended this test as an observer, and he

5.4 GENERAL SERIES - Continued

No.

Author

describes the census operation, census documents, mailing list operation, editing of returned forms, follow-up enumeration, special places and X-areas. Operationally he considers the Cleveland Test Census to have been a success. As follow-up ancillary studies the author mentions the Re-interview Survey, Publicity Evaluation Study and Enumeration Time Study. An extract from U.S. Census Bulletin (XV) 22, October 1965, states that the return rate for Cleveland was 80 per cent, about the same level as that attained in previous tests.

8. MATCH OF PROFESSIONAL ENGINEERS

D.E. Gower

Ottawa: Processed, December 1965, 5 pages

This random sample involved a matching of professional engineers from 1961 Census data with a list supplied by the Economic and Research Branch of the Department of Labour. The study was undertaken to find out (a) how the census enumeration matched with the information given in a Department of Labour questionnaire, and (b) to check the quality of coding on the Census 2A forms. The study shows existing discrepancies between earnings reported to the Department of Labour and those reported to census enumerators. The author is critical of open-end average-earnings tabulations in the 1961 Census, and his study throws some light on other problem areas in census statistics.

9. A NOTATIONAL SYSTEM FOR MATØP PROGRAMMING

L.O. Stone

Ottawa: Processed, November 1965, 7 pages, references

This memorandum proposes a notational system for MATØP programming by breaking down such a utility programme into two phases. In the first phase, the required formulas and procedures of data processing are broken down into a sequence of steps. As this phase requires a knowledge of basic programming principles, a facility with alternative ways of evaluating formulas, and an understanding of the computational problem in hand, this first phase is usually work of professionals. The second phase in MATØP programming consists of the actual posting of the MATØP code sheets. While this phase requires extreme accuracy, the preparation of the MATØP code sheets can be done by the clerical staff in following the notations prepared in phase one by a professional. The author describes the notational system and gives an example of notations for Phase One of a programme designed for MATØP I.

10. THE FUNCTIONS OF MEETINGS

Editor of
Technical
Memoranda

Ottawa: Processed, March 1966, 1 page

The memorandum is a reprint of a short article "Let's not talk it over" which appeared in the Financial Post, Toronto, March

5.4 GENERAL SERIES — Continued

No.

Author

10. — Concluded

5, 1966. The article claims that the average executive spends 60 per cent of his working time at meetings, that talk is not cheap, and that two meetings a week of one hour's length for ten persons earning fifteen thousand dollars per year will add up to \$25,000 a year. To cut costs the author of the article recommends to meet only when you have to, invite only those necessary, plan thoroughly in advance and estimate the meeting's probable cost versus its probable gain.

11. ETHNIC ORIGIN AND THE PAA

Ottawa: Processed, May 1966, 3 pages

Editor of the
Series

The purpose of this paper is to distribute the two resolutions reported in Technical Memorandum (General Series) No. 3

"Some comments on Norman Ryder's article on ethnic origin".

The two resolutions passed by the Population Association of America according to their annual report for 1964/65 are:

(a) "Resolution on race-color designation in the United States Census": Information about race or color should continue to be collected for statistical purposes in the United States census (b) "Resolution on race-color designation on vital records": The reporting of race or color information on vital records in the U.S. should remain a required item for statistical purposes

12. THE JOB CONTENT OF THE CANADIAN ECONOMY, 1941-1961

Ottawa: Processed, October 1966, 20 pages, references

S.T. Wargon

This summary is intended to focus attention on the approach to the study and classification of jobs by J.G. Scoville, The job content of the Canadian economy, 1941, 1951 and 1961. Dominion Bureau of Statistics, Cat. No. 71-507, (published jointly by the Census and Labour Divisions) Ottawa, April 1967. The memorandum describes Scoville's model for studying the job content in an economy, and it presents the actual job-content matrix as applied to Canadian data for 1961.

13. REPORT ON 1961 CENSUS PUBLICITY

Ottawa: Processed, December 1966, 13 pages

J.E. McKay

The report summarizes the publicity programme of the 1961 Census, its effectiveness and shortcomings. It states the main methods and materials used, the media of publicity such as newspapers and other publications, radio, television, household leaflets and posters; and it gives the results of census publicity by medium. The author finds that in most areas household leaflets held the top rank followed by daily and weekly newspapers. Radio was found to have a better rating than television. Television had the lowest rating in areas subject to competition of US television stations. The paper has a section on Census Commissioners' Comments on Publicity, and the appendix gives the Census Publicity questionnaire.

5.4 GENERAL SERIES - Continued

No.

Author

14. BIRTHS, DEATHS AND IMMIGRATION ON A CENSUS-YEAR BASIS FOR CANADA AND THE PROVINCES, 1921 (IMMIGRATION 1931) - 1966

M.E. Fleming

Ottawa: Processed, January 1967, 11 pages, tables

The purpose of this memorandum is to eliminate the problem of reconciling calendar-year data (January 1 to December 31) for births and deaths for Canada and the provinces published since 1921 in Vital Statistics with census-year data (June 1 of one year to May 31 of the following year) as shown in population estimates and actual census counts for births, deaths and immigration. The paper has historical tables for census years showing births, and deaths by sex for Canada and the provinces, 1921 - 1966, and for immigrants by sex for Canada and the provinces, 1931-1961.

15. SAMPLE SURVEY OF ENUMERATION ACTIVITIES IN 1961

R.J. MacNaught

Ottawa: Processed, May 1967, 10 pages, tables

The study states briefly as the purpose of this 20 per cent sample survey of enumeration activities: (a) to obtain basic data on census enumeration, (b) to determine the relative size and nature of the call-back problem, (c) to provide data on rates of completion of enumerator's assignments and (d) to provide more specific and comparative information on the call-back problem in selected census metropolitan areas. The paper outlines the limitation of sample results; sample composition; and average 1961 Census enumerator performance. The author's findings indicate that most of the call-back problems are found in urban areas. In census metropolitan areas call-backs amounted to 19 per cent of all visits; in urban areas to 17.9 per cent while in rural areas they made up 12.4 per cent of all visits by the enumerators. Seven tables of the sample survey provide the reader with more detailed statistics on enumeration activities.

16. RECONCILIATION AND ADJUSTMENT OF THE 1961 SAMPLE FERTILITY DATA

S.T. Wargon

Ottawa: Processed, August 1967, 38 p., 2 tables, references

The paper provides users of the 1961 fertility data, based on a 20 per cent household sample, with a reconciliation of these sample data with the 1961 Census total count of women ever married, 15 years of age and over; and it also contains a summary of the methods and procedures used in obtaining the estimates of women ever married by age at first marriage and number of children born; and in obtaining estimates of number of children born, and rates for children born per thousand women ever married. The author explains the weighting procedure for the estimates, and concludes with pointing out possible non-sampling errors. Appendix tables present the reconciliation figures for Canada and the provinces, and for the 1961 Census Metropolitan Areas.

5.4 GENERAL SERIES - Continued

- | <u>No.</u> | | <u>Author</u> |
|------------|---|---------------|
| 17. | <u>CANADIAN CENSUS DATA ON FERTILITY</u>
Ottawa: Processed, May 1967, 48 p., references

The memorandum summarizes Canadian census practices in regard to fertility. As the 1941 Census was the first one to collect detailed fertility data for Canada, the author gives the definitions of the inquiries for 1941, also those for 1961. Two appendices provide the reader with numerous source references to Canadian fertility data found in published and unpublished form. | S.T. Wargon |
| 18. | <u>MAIN TRENDS OF RESEARCH IN DEMOGRAPHY IN CANADA</u>
<u>(UNESCO QUESTIONNAIRE OF 1966)</u>
Ottawa: Processed, July 1967, 9 pages, references

The paper has been prepared in response to a questionnaire from UNESCO on the orientation, organization and finance of research in demography in Canada. The author lists the few research oriented institutions and organizations providing training facilities in Canada. Some of the questions found in the UNESCO questionnaire are quoted in two appendices of this paper. | K.J. Krotki |
| 19. | <u>DEMOGRAPHY: A GROWING MULTIDISCIPLINARY SCIENCE</u>
Ottawa: Processed, October 1967, 10 pages, references

The paper explains very briefly the meaning and scope of demography, its basic material and its historical development. The author shows the need of a multidisciplinary background for demographers, and he finds that the demand for demographic information is increasing in terms of basic statistics and demographic analysis. An appendix gives a list of university departments and training centres which are engaged in the teaching and training of demographers. A short list of references provides the reader with some background material. | M.V. George |
| 20. | <u>MORTALITY TRENDS IN CANADA, 1926 - 1965</u>
Ottawa: Processed, October 1967, 19 p., graphs, tables, references

The paper surveys trends and patterns of mortality in Canada, 1926-1965, and examines their implications for mortality projections. The author shows that there has been a levelling-off of the decline in death rates which may be accounted for by a combination of two different sets of factors acting against each other. Diseases of infectious origin have been practically eliminated while at the same time the relative importance of accidents, chronic diseases, and cardiovascular diseases as causes of death has increased. The examination of death rates by sex, age and cause of death in this survey tends to show that Canada's mortality may reach a level near the lowest level recorded in some countries of Europe, Oceania and the provinces of Canada, or near the biological limits, within a few years. | M.V. George |

5.4 GENERAL SERIES — Continued

<u>No.</u>		<u>Author</u>
21.	<u>MADHOUS — A COMPUTER SYSTEM FOR DECODING ADDRESSES</u> Ottawa: Processed, August 1968, 24 pages	J.L.J. Gauthier John Brockway

MADHOUS is an acronym for Mailing Address Decoding, Handling Or Unscrambling System. The paper describes the relative efficiency of this computer program that analyzes an ordinary mailing address by recognizing and identifying its various components through the use of the IBM 360 Assembler language. The main portion of the paper is intended for the reader only vaguely familiar with programming methods and techniques. Appendix I deals with the methodology of decoding while Appendix II gives instructions for the use of the MADHOUS package and other essential information for programmers. Sample computer print-outs show some decoded addresses.

22.	<u>RECONCILIATION AND ADJUSTMENT OF THE 1961 SAMPLE MIGRATION DATA</u> Ottawa: Processed, September 1968, 25 pages, tables, references	S.T. Wargon
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This memorandum provides users of the 1961 migration data, based on a 20 per cent household sample, with a reconciliation of the 1961 Census total counts for the population, 5 years of age and over, and for the labour force population, 15 years of age and over, with the counts which appear in the 1961 published tables and in some of the 1961 unpublished basic migration tables. The paper contains a summary of the methods and procedures used in processing and adjusting data from Form 4 of the 1961 census given in regard to migration information. The author explains the method used for weighting the raw data. She concludes with cautioning about non-sampling biases, and states that the sampling error of the 1961 migration estimates is not available. Two appendices present the reconciliation figures for Canada, urban, rural non-farm and rural farm, for both groups.

23.	<u>RECONCILIATION AND ADJUSTMENT OF THE 1961 SAMPLE INCOME DATA</u> Ottawa: Processed, October 1968, 15 pages, tables	J.R. Podoluk John Moran
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The memorandum presents partial reconciliation and the discrepancies between the 1961 sample income data, based on a 20 per cent non-farm household sample, with the 1961 Census total counts for the population, 15 years of age and over; the population in the labour force; families; persons not in families; and households. The authors explain the enumeration and processing methods of the 1961 Census, and the weighting procedure for income files. Seven tables provide users with figures for above groups concerning the partial reconciliation of sample estimates.

5.4 GENERAL SERIES — Concluded

No.

Author

24. HISTORY OF CENSUS ECONOMIC CHARACTERISTICS QUESTIONS, 1931-1967

M.B. Ismaily

Ottawa: Processed, December 1968, 17 pages

This memorandum presents an historical review of questions pertaining to economic characteristics asked in Canadian censuses from 1931 onwards up to the 1967 census test made in London, Ontario. The paper uses the 1961 Census questions on economic characteristics as a base and compares questions asked in other censuses and census tests with such 1961 questions. It attempts to explain some of the changes in concepts as well as changes in questions. The author concludes that there is a substantial demand for additional questions on economic characteristics. A list of questions on economic characteristics, asked from 1931 until 1967, is given in the appendix.

5.5 TECHNICAL MEMORANDA (ADDRESS REGISTER SERIES)

No.

Author

1. A DESCRIPTION OF THE ADDRESS REGISTER PROJECT
Ottawa: Processed, July 1966, 9 pages

A.H. Portigal

The paper describes an experiment in the compiling and testing of a mailing list of addresses which will be suitable for taking a census by mail through self-enumeration. The author outlines the scope and objectives of this project, and he reports briefly on the progress made to date on the first address register prepared for Kitchener-Waterloo. He lists some sources available for the compiling of a mailing list, and he refers to the problems of keeping the address register up-to-date and of the need for computer-readable sources. In conclusion the paper proposed some modifications to the existing programme to overcome the problem of misspelled street names.

2. AN ACCOUNT OF TIME AND COST
Ottawa: Processed, September 1966, 14 pages, tables

T.R. Sehdev

The author discusses time and cost factors involved in the development of a mailing list of street addresses (address register) for a city with a population of 100,000. Several tables show the break-down of time required for transcribing data, collection of related information, editing, key punching and computer runs. In other tables the author presents various costs and a unit cost analysis. A computer flow chart is shown also a sample sheet for transcribing addresses. The editor of the series comments that this is an incomplete time and cost study because not all the time of all personnel on all enquiries is accounted for. Therefore, no complete conclusions can be drawn from this study.

3. EVALUATION OF SOURCES IN THE KITCHENER-WATERLOO LIST
Ottawa: Processed, November 1966, 17 pages, tables

T.R. Sehdev

The memorandum evaluates the three primary sources used for developing an address register, based solely on street addresses, for the twin cities of Kitchener and Waterloo with a population of about 100,000. The paper compares (a) 1961 Census Visitation Records, (b) Electric utility billing lists, and (c) Municipal assessment rolls. It describes the method used in exploiting and evaluating the sources, problems encountered within each source, subsidiary sources and the amalgamation of the lists. The author draws the conclusions that (i) an address register can be developed from records of a municipal assessment department alone; (ii) a standardized list of street names is of prime importance; and (iii) previous census records are not suitable for the formation of an address register at a later date.

5.5 ADDRESS REGISTER SERIES -- Concluded

No.

Author

4. POSTAL CHECK OF THE KITCHENER-WATERLOO ADDRESS REGISTER
Ottawa: Processed, December 1966, 17 pages

T.R. Sehdev

The memorandum presents and analyzes data regarding a postal check of an experimental address register for Kitchener-Waterloo, twin cities with a population of about 100,000. The paper describes the operation, returns, processing phase, coverage improvement and effectiveness of the postal check. The results indicate that coverage was improved by two per cent while the adjusted effectiveness rate of 76.5 per cent compares favourably with similar tests reported by the U.S. Bureau of the Census. The author concludes that the experiment was of value in determining other variables such as deletions and modifications of addresses which helped to prepare the address register in its final form, as well as in an evaluation of sources.

5. PRELIMINARY ENQUIRY INTO EXISTING SOURCES OF ADDRESSES
Ottawa: Processed, September 1967, 14 pages, tables

T.R. Sehdev

The author investigates existing current lists of addresses for preparing address registers. Sources approached include commercial mailing lists, publishers of city directories, municipal assessment departments and electric utility companies. The author presents response data from the last two sources in tabular form, and he concludes that (1) it would be premature to discard commercial firms as primary sources although some doubts persist; (2) sole reliance can be placed on records of municipal assessment departments; and (3) utility billing lists are good supplementary sources.

6. Not issued

7. Not issued

8. FURTHER THOUGHTS ON THE COMPARISON OF THE FIELD LISTING OF ADDRESSES, THE MUNICIPAL ASSESSMENT ROLL AND THE 1966 CENSUS RECORDS OF LONDON, ONTARIO

L.W. Jones

Ottawa: Processed, January 1968, 5 pages

The memorandum provides additional information on data presented in Tables No. 1 and No. 2 of Technical Memorandum (Census Test Series) No. 9, "A match of the London municipal assessment roll with the field-listed address register and the 1966 Census visitation records". The author finds that the municipal assessment roll is more efficient for sub-addresses in centre town but not in the outskirts, and that it misses in six out of forty-two census tracts numbers of multi-unit addresses which appear in the other documents. The author assumes that this may be due to new construction of apartment houses which the postal check would not have missed. He concludes by stating that the municipal assessment roll is a slightly superior document but not in all parts of town, nor in every way.

6. Authors and Documentation

At times the Census Division has received requests for Census Technical Papers and Technical Memoranda that gave only the author's name without identifying such a paper by title, series, number, year of issue, or co-authors where applicable.

To overcome this handicap the following Section 6.1 "Alphabetical Listing by Authors" was prepared. This list will provide the user with immediate access to the bibliographical reference which enables the user to locate the wanted paper in the respective series. Papers having joint authorship have been listed under each individual co-author. The complete reference is found under the senior author while at the names of the other authors reference is made to the senior author.

By copying the citations as given in this list of authors (for joint authorship as shown under the senior author), time-consuming search for citation format will be avoided, and a desirable standardizing of documentation may be achieved.

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